

Today's Objective:

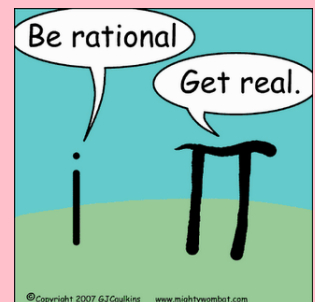
Students will be able to solve equations with rational coefficients.

Change \div to \times

$$\frac{2}{9} \div \frac{10}{7} = \frac{2}{9} \times \frac{7}{10}$$

Reciprocal

$$\begin{array}{r} 0.31 \\ 8.4 \overline{) 2.604} \\ \underline{-252} \\ 84 \\ \underline{-84} \\ 0 \end{array}$$



Some definitions we need to know...

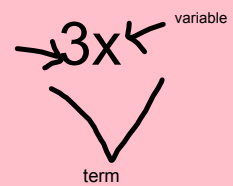
- rational number

any number that can be written as a fraction

- coefficient

the numerical factor of a term that contains a coefficient variable

the number in front of a variable



Decimal Coefficients

If the coefficient is a decimal, divide each side by the coefficient.

Example:

$$\frac{0.6h}{0.6} = \frac{13.02}{0.6}$$

What is the coefficient? 0.6

Divide both sides by the coefficient!

$$\begin{array}{r} 21.7 \\ 0.6 \overline{) 13.02} \\ \underline{-12} \\ 10 \\ \underline{-6} \\ 42 \\ \underline{-42} \\ 0 \end{array}$$

← First, set it up!!

Next, get rid of the decimal in the divisor (outside of the box).

Move the same amount of spaces in the dividend as you did to the divisor!

Then, divide normally - divide, multiply, subtract, bring down - until you reach "0"

How could I check my answer?

Example:

$$\frac{0.9}{0.4} = \frac{0.4m}{0.4}$$

$$m = 2.25$$

$$\begin{array}{r} 2.25 \\ 0.4 \overline{) 0.9.00} \\ \underline{-8} \\ 10 \\ \underline{-8} \\ 20 \\ \underline{-20} \\ 0 \end{array}$$

Now you try....

$$\frac{-16}{0.2} = \frac{0.2b}{0.2}$$

$$b = -80$$

$$0.2 \overline{) 160} \begin{array}{r} 80. \\ -160 \\ \hline 0 \end{array}$$

$$\frac{0.5y}{0.5} = \frac{19.5}{0.5}$$

$$y = 39$$

$$0.5 \overline{) 19.5} \begin{array}{r} 39 \\ -15 \\ \hline 45 \\ -45 \\ \hline 0 \end{array}$$